

Severe course of coronavirus disease 2019 in a middle-aged man without risk factors

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In the coronavirus disease 2019 (COVID-19), the wide spectrum of clinical severity is observed: from mild or even asymptomatic disease to acute respiratory distress syndrome, critical illness, and death.¹⁻³ The risk factors for worse outcomes are still uncertain but what seems consistent is that older age and presence of comorbidities (diabetes, cardiovascular and cerebrovascular diseases) appear to increase the risk of severe disease.^{2,4}

We present a case of a critically ill patient with not known risk factors of severe course of COVID-19.

A 43-year-old white man without underlying conditions was admitted to the infectious diseases clinic on March 20, 2020 with fever up to 39.5°C, malaise, and nonproductive cough that started 6 days before.

The patient was in good general condition. On physical examination, apart from throat irritation, no abnormalities were discovered. Mild leucopenia (white blood cell count, $3.57 \times 10^3/\mu\text{l}$; normal range, $4-10 \times 10^3/\mu\text{l}$), thrombocytopenia (platelet count, $107 \times 10^3/\mu\text{l}$; normal range, $150-420 \times 10^3/\mu\text{l}$), and elevated C-reactive protein (113 mg/l; normal range < 6 mg/l) were observed in laboratory tests. Influenza quick smear test was negative. A specimen as taken from the nasopharynx for a genetic test for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The patient was discharged and advised to self-isolate at home. Laboratory confirmation of COVID-19 was obtained on the next day.

Two days after the discharge, the patient returned to the hospital due to dyspnea. Laboratory tests revealed further increase of C-reactive protein levels up to 250 mg/l, normal white blood cell count of $8.26 \times 10^3/\mu\text{l}$ with lymphopenia of $0.7 \times 10^3/\mu\text{l}$ (normal range, $1.0-4.0 \times 10^3/\mu\text{l}$). The patient had the following vital signs: oxygen saturation as measured by pulse oximetry of 94%, blood pressure of 80/60, body temperature

of 37.1°C. On chest X-ray, bilateral ground-glass opacities in lower lobes and focal consolidation of the left lung were present (FIGURE 1A). The patient was admitted to the infectious diseases ward.

Treatment with chloroquine (orally 1.0 g per day in 2 doses), antibiotics (intravenous ceftriaxone 2.0 g per day and oral clarithromycin 1.0 g per day in 2 doses), oxygen (mask), and intravenous fluids was initiated. On March 23, signs of respiratory failure appeared. Patient was transferred to the intensive care unit (ICU) where respiratory mechanical ventilation in bilevel positive airway pressure mode was introduced as well as intravenous norepinephrine due to circulatory failure that appeared the next day. Blood, urine, and respiratory secretion cultures were negative.

Another chest X-ray revealed progression in ground-glass opacities and focal consolidations, especially in the left lung (FIGURE 1B).

In the following days, despite a decrease in inflammatory markers, the clinical status remained unchanged. The patient was treated in the ICU until April 6, 2020, from where he was transferred to the internal medicine ward, where he is being treated until now.

Bilateral ground-glass opacities and focal consolidations (especially in the periphery and subpleural regions of the lower zones) on chest X-ray observed in this patient are most common radiologic finding in COVID-19.¹ In our patient, the clinical worsening was observed 6 days after the onset of symptoms, patient was admitted to the hospital after 9 days and transferred to the ICU after 10 days, which corresponds with previous findings that the disease progression usually occurs in 1 to 2 weeks after the onset of symptoms.⁴⁻⁵ What is unexpected in the case presented above is progression to critical illness in a young person with no underlying condition.

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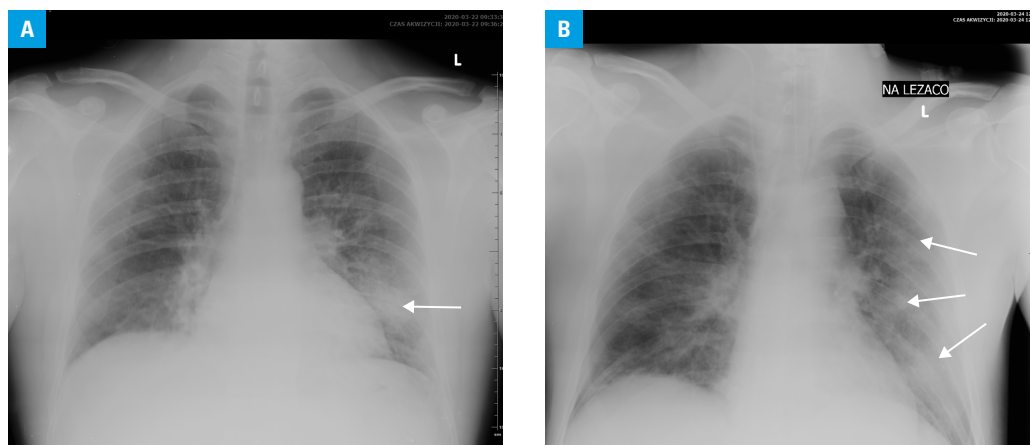
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FIGURE 1 Chest X-ray showing: **A** – bilateral ground-glass opacities in lower lobes and focal consolidation of the left lung (arrow) 9 days after symptoms onset, on the day of admission to the hospital; **B** – ground-glass opacities and focal consolidations progression, especially visible in the left lung (arrows), 11 days after symptoms onset. The patient was transferred to the intensive care unit.



ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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